

# *Introducing B2i2C: an M-commerce model for SMEs.*

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**Abstract**— SMEs represent a major part of the world economy, however they face major challenges in breaking into electronic commerce and specifically mobile commerce. This paper studies the transition to m-commerce in the context of SMEs in the UK and Kuwait. By conducting a review of the top downloaded applications from four application stores and reflecting on the most successful breakthroughs, the authors identify a business model for SMEs. This model is introduced as B2i2C. In this model, intermediaries businesses provide value and opportunities for SMEs as well as allowing consumers to better compare and customize products or services. This outcome suggests that the presence of an intermediary is not just a specific case for a specific region; it could be a generalized world wide beyond the UK and Kuwait.

**Keywords**— M-commerce, SME, E-commerce, business model, B2i2C.

## I. INTRODUCTION

M-commerce is a process of selling and buying using mobile devices with help of the Internet [1]. The technology has its characteristics, risks, and limitations [2]. When it comes to companies considering an Internet presence, those companies have several opportunities to select from. Companies can have an informative website which offers information related to their products/services. Yet no commerce is to happen here. Then companies can switch to an E-commerce website where they conduct commerce activities. However, significant opportunities exist in M-commerce for variety of businesses such as sales growth and new business models continue to outstrip other mediums in E-commerce [3]. In moving on towards the M-commerce, companies have the option to adapt their existing website to mobiles or to create an application. Business Applications supported by trusted app stores have provided the required assurances for consumers [4]; yet Web based M-commerce remains dominant with evidence that traditional SME businesses are using M-commerce to compete at local and national level [5]. The real business prospect in SME M-commerce comes from the opportunities to be involved in new business models and integrating new technologies where innovations and creativity is highly rewarded [6]. In this respect, the authors conduct a review of the current market state of SME business when it comes to M-commerce. New business intermediaries [7] models as well as Mass Customizations [8] are two models the team considered to have strong bearing in encouraging SME businesses.

## II. LITERATURE REIVIEW

There are some variations in defining SMEs. For the purpose of this paper, SMEs will be defined as a business employing 250 or less [9]. SME represents more than 99% of businesses in the EU alone [10]. According to the World Bank Group, almost 90% of all SMEs employ 1 to 9 individuals [11]. While many SMEs may well have developed some online presence, few went towards supporting their own mobile apps. M-commerce users' requirements vary from E-commerce users. Thus a mobile optimized website does not satisfy entirely those requirements. Mobile applications are significantly different from the ones created for PCs and laptops because their users have a different set of needs and expectations [12] and this presents challenges as well as new opportunities for SMEs. Thus new models, approaches, and support had to be considered to allow SMEs to break into the M-commerce market.

### A. M-Commerce models for SMEs:

There is limited literature existing considering business models for SMEs in M-commerce. M-commerce is a subset of E-commerce, and thus would inherit the seven main types of informational added values. However, M-commerce is distinctive and this distinctiveness introduces additional added values, the Mobile Added Values (MAV) [13]. The development of rational applications that lead to added values is considered essential for the success of M-commerce for SMEs.

For physical products, M-commerce has traditionally been used for provision of information or sales promotion rather than for the selling itself. However, M-commerce enables the individualization of the application, which is soft customization, a category of mass customization [13]. This specificity allows the application to adapt to the respective devices. It enables the user to customize the application, to change the settings of the interface of the application. This adjustment improves the user experience with the application. Another advantage is that with the individualization of the application, users can be targeted better, and customer specific content are more successful.

### B. SMEs and Mass Customization:

Mass Customization represents one of those opportunities for SME [14]. Mass Customization is defined as a process that

allows clients' involvement in the advancement phase of a product, producing altered mass quantities that could be offered to the [15,16,17].

Mass Customization of products and services presents a competitive advantage in global business market of E-commerce [18]. The main idea behind Mass Customization is to benefit from the reduced cost and reduced lead time of Mass Production yet tailor output to meet the desire of the customer [19,20]. It was found achieving customer satisfaction became easier especially at the early stages of development [21]. The move from Mass Production to Mass Customization has been driven by the advancement of technology using the Internet that facilitated communication including M-commerce [19,22]. Despite this distinctive characteristic, SMEs faced a major hurdle in reaching its audience.

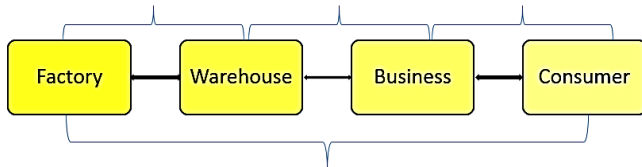


Fig. 1. F2b2C model [27]

### C. Business Intermediaries:

This use of mass customization has provided new business models in collaborative development of customized products [23]. An example of such collaborative work is the F2b2C model [24]. F2b2c involves businesses (b) acting as intermediaries for factories (F) as they send customized requests for which manufactures send custom products directly to consumers (C) [25].

F2b2C came about to label what traditionally used to be explained as B2B as factory to warehouse, followed by another B2B in the form of intermediary warehouse to business, and finally business to consumer (B2C) (Tseng et al. 2003). According to [27] the three models are seen as one interrelated system without any isolation among them.

### III. REFLECTION ON THE LITERATURE

The problem with many of the traditional models presented in the literature is that they have neglected the unique nature of M-commerce and the specific challenges for SMEs. There is evidence that SME businesses are attempting to fight back and use M-commerce to do so in the form of web-based mobile applications [5]. SME based applications have not seen much success [28] as the market of App downloads continues to be dominated by digital goods, entertainment, services, and large enterprise business applications. Yet new E-commerce models continue to be identified in the literature and there remains a limited or lack of interest in exploring potential breakthroughs for traditional SME business in this area. Given the expanding use of M-commerce and the economic impact of SMEs, identifying an SME business model in the M-commerce market is significantly important.

The F2b2C model represents the emergence of new E-commerce business model that does not fit into the

traditional nine E-commerce business models, where Consumers, Business and Governments are the sole actors; or where these actors are boxed into specific roles. New business successes involving SME businesses breakthrough via new intermediary business models present the opportunity that SMEs needed. Therefore, there is a need for a new vocabulary to clearly designate these emerging models.

### IV. METHODOLOGY

The paper approach is to conduct a market review of App stores, based on data collection market survey and market observation. The team would then review opportunities for breakthroughs and provide justification for such models.

The team reviewed top apps as provided by the following App stores: UK Android Play Store, UK Apple App store, Kuwait Android Play Store and Kuwait Apple Store. It is the view that this sample represents two distinctive size economies and thus would provide good bases for drawing our findings. In total, the team reviewed nearly 1645 applications collected from the applications charts for the purpose of classifying these applications into three categories: SME Businesses, Alternative SME Models, while anything else is classified as 'others'. SME Business refers to applications launched by SME to selling their products and/or services directly to consumers. Alternative SME models refer to opportunities where SMEs are able to sell via intermediaries' applications.

The findings are then analyzed to identify successful SME applications and SME models. Reflective analysis is used to generate the model(s) that are seen to be providing the best opportunities for SME M-commerce models success. Reflective analysis, also called reflection, critical reflection, or reflexivity, is a research methodology suggested by several researchers [29, 30, 31,32].

Some researchers view this methodology as unconnected method or part of a wider method to action research in transformative learning approach [33].

Researchers at Ryerson University [34] explain that in a reflective research paper an author writes about their personal experiences, analyses them and provides findings that might be generalizable to a broader set of circumstances.

One of the earliest researchers to suggest this approach is Jennifer Moon [35]. The purpose of reflection is to consider something in more detail is usually to reach a goal(s) [36]. The input to the reflection process includes knowledge that we already have in the form of experience, thoughts, ideas, feelings, coupled with new findings or information. It is the latter element that allows researchers to draw from such process possible new outcomes. Moon [35] suggested that a reflective approach is usually needed where there is no obvious or immediate solution and the input is complicated or unstructured. She presented reflection as a form of thinking that is represented in an input–outcome model. On the other hand, critical reflection involves a process of learning from experience, which includes academic research, with the aim of improving professional practice [32].

## V. RESEARCH FINDINGS

### A. Review of Applications stores:

The following are the outcomes of the applications stores review as shown in table 1. For the UK Android Play store, of the most popular 500 applications the team found: 0 applications for SME businesses; 25 applications associated with SME models where SME are able to sell via intermediaries; and the remaining applications 475 are classified as 'others'. For the UK iTunes App store, of the most popular 145 applications, the team found: 0 applications for SME businesses; 6 applications associated with SME models where SME are able to sell via intermediaries; and the remaining 139 applications are classified as 'others'. For the Kuwait iTunes App store, of the most popular free 500 applications, the team found: 0 applications for SME businesses; 21 applications associated with SME models where SME are able to sell via intermediaries; and the remaining applications are classified as 'others'. For the Kuwait Android Play store, of the most popular free 500 applications, the team found: 0 applications for SME businesses; 11 applications associated with SME models where SME are able to sell via intermediaries; and the remaining 489 applications are classified as 'others'.

This review of both stores in the UK and Kuwait shows that SME applications are none existent when it comes to SMEs doing their own M-commerce. However, SME businesses are seeing potential new business models that would allow them to reach new and existing customers. At the time of writing this paper, this model represented around 5% of the most popular applications downloaded from the App stores and yet there remains no official model for it.

Country	UK		Kuwait		Total
Points of comparison	Android play store	iTunes App store	Android play store	iTunes App store	Android and iTunes
Applications for SME businesses	0	0	0	0	0
Applications for SME sell via intermediaries	25	6	11	21	63
Others	475	139	489	479	1,582
Total	500	145	500	500	1,645

Table 1: summary of applications store review

### B. B2i2C: A new SME business model

A review of the intermediaries' Apps leads the team to make the following observation. In these models the team observes that intermediary businesses play a key role. Intermediaries operate between the consumer and the SME businesses. This is consistent in all the App stores we reviewed and they are consistent in terms of the number of companies. Their position enables them to charge for the added value they create. In most cases the intermediary would not hold stock and consequently would not be competing with the SMEs.

Instead, the SMEs would use the platform to compete against each other. The intermediary business would generate profit based on charges and it enables tailoring products and services to specific customer needs. This represents no typical business model and therefore the team represents this as an 'i' for intermediary business.

From table 1 and based on the analysis of these apps, the team concludes that the intermediary company is doing the same type of business in all the cases, and accordingly it became a general type of business. The way those companies are managing their transactions between the businesses and the customers is alike, hence we can generalize this case as a proof for a new model of M-commerce that is B2i2C.



Fig. 2. B2i2C supply chain.

What are left are the traditional SME Business (B) and Consumer (C) with the intermediary in the B2i2C providing efficient platforms that is trusted by the consumer and provides added value to the business. Such intermediary would in theory offer consumers a platform for comparing and evaluating products and services. It enables consumers to rate SMEs and is a place where feedbacks are shared. Consumers have needs in the form of maximizing quality and value while minimizing time invested to achieve that. The B2i2C model represents those needs that are best presented via a trusted intermediary application. An intermediary business is capable of presenting products/services related to specific market yet provide more categories, options, and choices. What is more, those selections could to be comparable, sorted, and presented in ways that makes consumers feel at easy at buying. B2i2C could provide anything from commodity, convenient, digital, and perishables goods, as well as services. Moreover, B2i2C allows for mass customization of products and services applicable. Thus, B2i2C is observed in applications that facilitate taxi services, food deliveries, hotel bookings, holiday home bookings, clothing, household goods, electronic goods, car sale, property sale, and property rentals. This model represents a good value for commerce for all parties. In fact, it represents a model whereby local and traditional SMEs could break into the M-Commerce market. Consumer represents here a key factor that is sometime neglected by SMEs when considering M-commerce. Consumers do not want to download individual SMEs' applications and switch between applications to compare products or services. Instead, consumers with limited mobile space and limited patience prefer an application that compares SMEs and gives the buyers choices, value, and convenience at the same time.

For businesses, this model represents good value compared to the marketing costs and initial investments. It provides faster access and wider reach as well as trust in ordering which is processed by the intermediary business. On the other hand, such platform would be highly competitive and profit margins tend to be squeezed.

For the intermediary business, there are challenges in getting the application adopted by significant SMEs, maintaining the application, as well as ensuring trust in the process as outlined earlier. This requires experience and having clear business vision and M-commerce model. The fee structure needs to be scaled in proportion to the value the company provides. The rewards could be relatively high and fast as evident from some of the case studies of B2i2C internationally such as Uber [6] and nationally as is the example with Talabat App; an online food ordering service initially started in Kuwait [37].

As the team review of the current business applications shows, the key finding for traditional SMEs to take advantage of the opportunities presented in M-commerce is through following the B2i2C model. The investment is minimal and SMEs do not require having a prior E-commerce presence.

## VI. RESEARCH LIMITATIONS AND CONCLUSION

There are several research limitations that the team acknowledges. The reflective analysis is subjective and reflects the experiences of the team in their observation of the current market development. The sample used to review the current state of the applications market is restricted to the UK and Kuwait markets and the two most popular stores. Accessibility to other applications stores made further analysis restricted, as each store requires users to have billing addresses in such countries. The team acknowledges that the sample could be extended to include additional applications markets. While a review of other applications markets may produce variations in the results as witnessed between UK and Kuwait market, this does not affect the key contribution the paper presents in identifying a new business model for SMEs.

The team believes that there remain potentials to explore new areas where SMEs can break into new markets using beyond those identified in the applications store reviews. The market for SMEs to compete in the digital commerce has opened up new opportunities for those businesses willing to compete on quality and price. The team recommends closer observation on how this business model will evolve as it expands into new areas for mass customization of products and accessibility to information about services provided. The underlined business model, B2i2C per se, and what it means creates a new business opportunity for intermediaries companies.

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